

Appl. No. 10/800,555
Amdt. dated 06/29/2005
Response to Office Action of 03/30/2005

Attorney Docket No.: N1085-00267
TSMC2003-1135

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

- 1 1. (Currently Amended) A parallel ruler comprising:
2 a frame having a flat portion with an upper surface, and
3 a plurality of gauges disposed in [[a]] the flat portion and not extending above the
4 upper surface of the frame, the gauges having compressible parts protruding downward
5 beyond a lower surface of the frame for measuring a distance to a plane.
- 1 2. (Original) The parallel ruler of claim 1, wherein the gauges have measurement
2 indications which are readable from an upper surface of the frame.
- 1 3. (Original) The parallel ruler of claim 2, wherein the gauges comprise a back
2 plunger dial indicator.
- 1 4. (Original) The parallel ruler of claim 2, wherein the frame comprises a sustaining
2 structure and a gauge hosting structure, the gauges being disposed in the gauge
3 hosting structure.
- 1 5. (Original) The parallel ruler of claim 4, wherein the gauge hosting structure is
2 supported by the sustaining structure.
- 1 6. (Original) The parallel ruler of claim 4, wherein the gauge hosting structure and
2 the sustaining structure are of ring shape.
- 1 7. (Original) The parallel ruler of claim 6, wherein the sustaining structure has
2 handles.

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1 8. (Original) The parallel ruler of claim 6, wherein at least three gauges are
2 disposed in the gauge hosting structure.

1 9. (Original) The parallel ruler of claim 8, wherein gauges are disposed substantially
2 equidistant from adjacent gauges.

1 10. (Original) The parallel ruler of claim 6, further comprising:
2 a plurality of ancillary gauges disposed in the sustaining structure of the frame.

1 11. (Currently Amended) A method of measuring a position and orientation of a
2 plane, comprising:

3 disposing a parallel ruler over a plane, the parallel ruler comprising a frame and
4 a plurality of gauges disposed in a flat portion of the frame, the gauges having
5 measurement indicators that do not extend above an upper surface of the flat portion,
6 and compressible parts protruding downward beyond a lower surface of the frame for
7 measuring a distance to the plane;

8 measuring level of compression of the compressible parts of the gauges when at
9 least compressible part of one gauge contacts the plane;

10 adjusting the plane until level of compression of the compressible parts of every
11 gauge is approximately the same.

1 12. (Original) The method of claim 11, further comprising:
2 calibrating the parallel ruler before disposing the parallel ruler over the plane.

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- 1 13. (Original) The method of claim 11, further comprising:
2 adjusting the plane until level of compression of the compressible parts of every
3 gauge reaches a predetermined value.
- 1 14. (Original) The method of claim 11, wherein at least three gauges are disposed in
2 the flat portion of the frame.
- 1 15. (Original) The method of claim 11, wherein the plane is an upper surface of a
2 movable electrode.
- 1 16. (Original) The method of claim 11, wherein the plane is an upper surface of a
2 movable cathode in an etching device.
- 1 17. (Currently Amended) A method to measure a position and orientation of a
2 movable electrode, comprising:
3 calibrating a parallel ruler, the parallel ruler comprising a sustaining structure, a
4 gauge hosting structure supported by the sustaining structure, and a plurality of gauges
5 disposed in a flat portion of the gauge hosting structure, the gauges including
6 measurement indicators that do not extend above a planar upper surface of the flat
7 portion and having compressible parts protruding downward beyond a lower surface of
8 the gauge hosting structure for measuring a distance to the electrode;
9 disposing the parallel ruler over the movable electrode;
10 measuring level of compression of the compressible parts of the gauges when at
11 least compressible part of one gauge contacts the movable electrode;
12 adjusting the movable electrode until level of compression of the compressible
13 parts of every gauge reaches a predetermined value.

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- 1 18. (Original) The method of claim 17, wherein the movable electrode is a movable
2 cathode in an etching device.
- 1 19. (New) A parallel ruler comprising:
2 a frame having a flat portion with an upper surface, and
3 a plurality of gauges including measurement indicators which are readable from
4 the upper surface of the frame, the gauges disposed in the flat portion, not extending
5 above the upper surface and having compressible parts protruding downward beyond a
6 lower surface of the frame for measuring a distance to a plane.

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- 1 1. (Currently Amended) A parallel ruler comprising:
2 a frame having a flat portion with an upper surface, and
3 a plurality of gauges disposed in [[a]] the flat portion and not extending above the
4 upper surface of the frame, the gauges having compressible parts protruding downward
5 beyond a lower surface of the frame for measuring a distance to a plane.
- 1 2. (Original) The parallel ruler of claim 1, wherein the gauges have measurement
2 indications which are readable from an upper surface of the frame.
- 1 3. (Original) The parallel ruler of claim 2, wherein the gauges comprise a back
2 plunger dial indicator.
- 1 4. (Original) The parallel ruler of claim 2, wherein the frame comprises a sustaining
2 structure and a gauge hosting structure, the gauges being disposed in the gauge
3 hosting structure.
- 1 5. (Original) The parallel ruler of claim 4, wherein the gauge hosting structure is
2 supported by the sustaining structure.
- 1 6. (Original) The parallel ruler of claim 4, wherein the gauge hosting structure and
2 the sustaining structure are of ring shape.
- 1 7. (Original) The parallel ruler of claim 6, wherein the sustaining structure has
2 handles.

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1 8. (Original) The parallel ruler of claim 6, wherein at least three gauges are
2 disposed in the gauge hosting structure.

1 9. (Original) The parallel ruler of claim 8, wherein gauges are disposed substantially
2 equidistant from adjacent gauges.

1 10. (Original) The parallel ruler of claim 6, further comprising:
2 a plurality of ancillary gauges disposed in the sustaining structure of the frame.

1 11. (Currently Amended) A method of measuring a position and orientation of a
2 plane, comprising:

3 disposing a parallel ruler over a plane, the parallel ruler comprising a frame and
4 a plurality of gauges disposed in a flat portion of the frame, the gauges having
5 measurement indicators that do not extend above an upper surface of the flat portion,
6 and compressible parts protruding downward beyond a lower surface of the frame for
7 measuring a distance to the plane;

8 measuring level of compression of the compressible parts of the gauges when at
9 least compressible part of one gauge contacts the plane;

10 adjusting the plane until level of compression of the compressible parts of every
11 gauge is approximately the same.

1 12. (Original) The method of claim 11, further comprising:
2 calibrating the parallel ruler before disposing the parallel ruler over the plane.

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- 1 13. (Original) The method of claim 11, further comprising:
2 adjusting the plane until level of compression of the compressible parts of every
3 gauge reaches a predetermined value.
- 1 14. (Original) The method of claim 11, wherein at least three gauges are disposed in
2 the flat portion of the frame.
- 1 15. (Original) The method of claim 11, wherein the plane is an upper surface of a
2 movable electrode.
- 1 16. (Original) The method of claim 11, wherein the plane is an upper surface of a
2 movable cathode in an etching device.
- 1 17. (Currently Amended) A method to measure a position and orientation of a
2 movable electrode, comprising:
3 calibrating a parallel ruler, the parallel ruler comprising a sustaining structure, a
4 gauge hosting structure supported by the sustaining structure, and a plurality of gauges
5 disposed in a flat portion of the gauge hosting structure, the gauges including
6 measurement indicators that do not extend above a planar upper surface of the flat
7 portion and having compressible parts protruding downward beyond a lower surface of
8 the gauge hosting structure for measuring a distance to the electrode;
9 disposing the parallel ruler over the movable electrode;
10 measuring level of compression of the compressible parts of the gauges when at
11 least compressible part of one gauge contacts the movable electrode;
12 adjusting the movable electrode until level of compression of the compressible
13 parts of every gauge reaches a predetermined value.

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- 1 18. (Original) The method of claim 17, wherein the movable electrode is a movable
2 cathode in an etching device.
- 1 19. (New) A parallel ruler comprising:
2 a frame having a flat portion with an upper surface, and
3 a plurality of gauges including measurement indicators which are readable from
4 the upper surface of the frame, the gauges disposed in the flat portion, not extending
5 above the upper surface and having compressible parts protruding downward beyond a
6 lower surface of the frame for measuring a distance to a plane.